## (19) World Intellectual Property Organization International Bureau





## (43) International Publication Date 7 August 2003 (07.08.2003)

**PCT** 

## (10) International Publication Number WO 03/063698 A1

(51) International Patent Classification<sup>7</sup>: 5/20, 5/22

A61B 5/00,

(21) International Application Number: PCT/JP02/08389

(22) International Filing Date: 20 August 2002 (20.08.2002)

(25) Filing Language:

**English** 

(26) Publication Language:

English

(30) Priority Data:

2002-20178

29 January 2002 (29.01.2002) J

- (71) Applicant (for all designated States except US): NIHON UNIVERSITY [JP/JP]; 8-24, Kudan-minami 4-chome, Chiyoda-ku, Tokyo 102-8275 (JP).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): OMATA, Sadao [JP/JP]; c/o NIHON UNIVERSITY, 8-24, Kudan-minami 4-chome, Chiyoda-ku, Tokyo 102-8275 (JP).

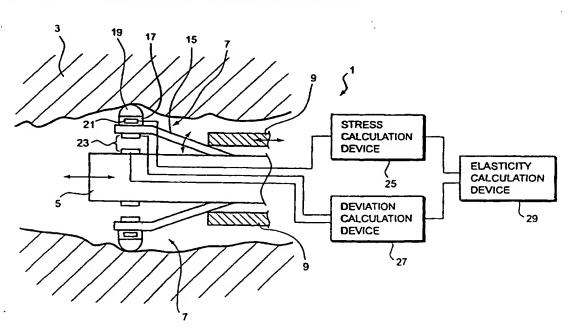
- (74) Agents: ISHIHARA, Masanori et al.; ISHIHARA & ISHIHARA, 4F, Miyamasuzaka ST Building, 8-6, Shibuya 1-chome, Shibuya-ku, Tokyo 150-0002 (JP).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

with international search report

[Continued on next page]

(54) Title: ELASTICITY MEASURING DEVICE FOR BIOLOGICAL TISSUE



(57) Abstract: We disclose an elasticity-measuring device which can be inserted into a canal part of living body and which is capable of quantitatively measuring the elasticity of the biological tissue of inner side of canal part. The device consists of a probe base (5) and probes (7). The probes (7) are secured to probe base (5) and driven to press onto and return from biological tissue. According to the stress or hardness of the biological tissue measured by sensors on probes (7) and to the deviation between the probes (7) and the probe base (5), we can decide the elasticity of the biological tissue of inner side of canal part quantitatively.

03/063698 AJ